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<p>99-289173/25 A56 B07 D21 (A97) BASF AG 97.11.10 97DE-1049618 (99.05.12) A61K 7/42, 7/48, B01F 17/52 Water in oil emulsion containing dispersed polymerisate used as thickeners in cosmetic and pharmaceutical preparations C99-085678 Addnl. Data: TIEFENSEE K, SCHEHLMANN V, RUEBENACKER M</p>	<p>A(12-V1, 12-V4A, 12-V4C, 12-W12C) B(4-C3, 14-R1, 14-R2) D(8-B3, 8-B9A) .2</p> <p>(14)</p>
<p>NOVELTY Use of water in oil (W/O) emulsions having an oil phase consisting of fatty acid ester(s) and containing a dispersed, crosslinked water-swellaible polymerisate consisting of ionic monomers (optionally together with non-ionic monomers) and bifunctional monomer(s) as thickeners in cosmetic and pharmaceutical preparations.</p> <p>DETAILED DESCRIPTION W/O emulsions having an oil phase consisting of fatty acid ester(s) and containing a dispersed water-swellaible polymerisate consisting of: (a) 35-100 wt.% ionic monomers; (b) 0-65 wt.% non-ionic monomers; and (c) 0.3-1 mol% bifunctional monomer(s) based on (a) and (b).</p>	<p>INDEPENDENT CLAIMS are included for: (A) the W/O emulsions in which the oil phase consists of polyglycol fatty acid esters from a polyglycerol mixture containing diglycerol and triglycerol and a fatty acid mixture containing caprylic and/or capric acid; and (B) cosmetic and pharmaceutical preparations containing the W/O emulsion.</p> <p>USE As a thickener in cosmetic and pharmaceutical preparations, especially skin and hair cosmetics, e.g. body lotions and sunscreen emulsions. The preparations typically contain 0.1-0.8 %, preferably 0.2-0.5 %, of the polymerisate.</p> <p>ADVANTAGE Conventionally used carbomers, because of their pulverous nature and poorly wettable, require lengthy homogenization. They also need neutralization after incorporation in water. In contrast, the</p> <p>DE 19749618-A+</p>

polymerisates are readily wettable and neutralization is not required (the originally produced pH is 6-7). The polymerisates also have a good efficiency, are self-inverting and products incorporating them have a smooth appearance.

EXAMPLE

A typical emulsion is produced by polymerizing a monomer emulsion containing water (520 g), acrylic acid (218 g), triethanolamine (89.6 g), divinylpyrrolidone (2.5 g), Miglyol 812(TM) (caprylic acid/capric acid triglyceride containing 50-65 % caprylic acid and 30-45 % capric acid) (275 g), Span 80(TM) (sorbitan monooleate) (16.5 g) and Arlacel P 135(TM) (ABA block copolymer from a hydroxystearic acid condensate and polyethylene glycol) (5.5 g) with Wako V 50(TM) (2,2'-azobis(2-amidinopropane).2HCl) (2 x 0.8 g) as the initiator. A typical body lotion is produced firstly by separately preparing two solutions:
(A) containing Cremophor A6(TM) (cetareth-6 and stearyl alcohol) (2 %); Cremophor A25(TM) (cetareth-25) (2 %); almond oil (6%); Imwitor 960 K(TM) (glyceryl stearate SE) (3 %); Lanette O(TM) (cetearyl alcohol) (1.5%); Abil 100(TM) (dimethicone) (0.5 %) and Luvitol EHO(TM) (cetearyl octanoate) (8%); and
(B) containing 1,2-propylene glycol (3 %); glycerol (2 %); aloe vera

gel (3 %); polymerisate (0.3 %) and water (65.3 %).
Solutions (A) and (B) are heated separately to 80 °C, (B) is homogenized in (A), collagen CLR (3 %) is added and the mixture is homogenized to give the body lotion.

TECHNOLOGY FOCUS

Organic Chemistry - Preferred Method: Emulsions are used in which the oil phase consists of polyglycol fatty acid esters and the ionic monomer component (a) of the polymerisate comprises 3-5 C carboxylic acids, especially acids which are 5-80 % neutralized. The emulsion can also contain 0.25-7 wt.%, especially 0.5-5 wt.%, of an emulsifier.
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